Marketplace Technical Foundation - Niche E-Commerce

January 16, 2025

Overview

The marketplace has been designed for a single business owner who is both the manufacturer and the seller. The focus is on products, customers, orders, shipping, and reviews, that leverages the product improvements and personalization.

Scenario: Handmade Jewelry & Bags Marketplace

The marketplace specializes in selling handmade jewelry and bags. The business owner manages product designing, manufacturing, order processing, and customer engagement.

Technical Requirements

Frontend (Next.js):

- **Homepage:**
  - Highlights featured items and categories (e.g., Best Sellers, New Arrivals).
  - Hero banner showcasing a best-selling product with a "Shop Now" button.
- **Product Listing Page:**
  - Displays products by category, popularity, or new arrivals.
  - Filter options for price range, materials, and ratings.
- **Product Details Page:**
  - Includes product name, price, description, materials, and dimensions.
  - Displays customer reviews with average ratings and individual comments.
  - Buttons for "Add to Wishlist" and "Add to Cart."
- **Cart and Checkout:**
  - Displays selected products with quantities and total price.
  - Options for payment and delivery address entry.
- **Order Tracking:**
  - Allows customers to view the status of their orders.
  - Provides real-time shipment tracking via an integrated API.
- **Reviews Section:**

  - ○ Collects and displays customer feedback for each product.
  - ○ Calculates and shows average ratings.

---

4. System Architecture
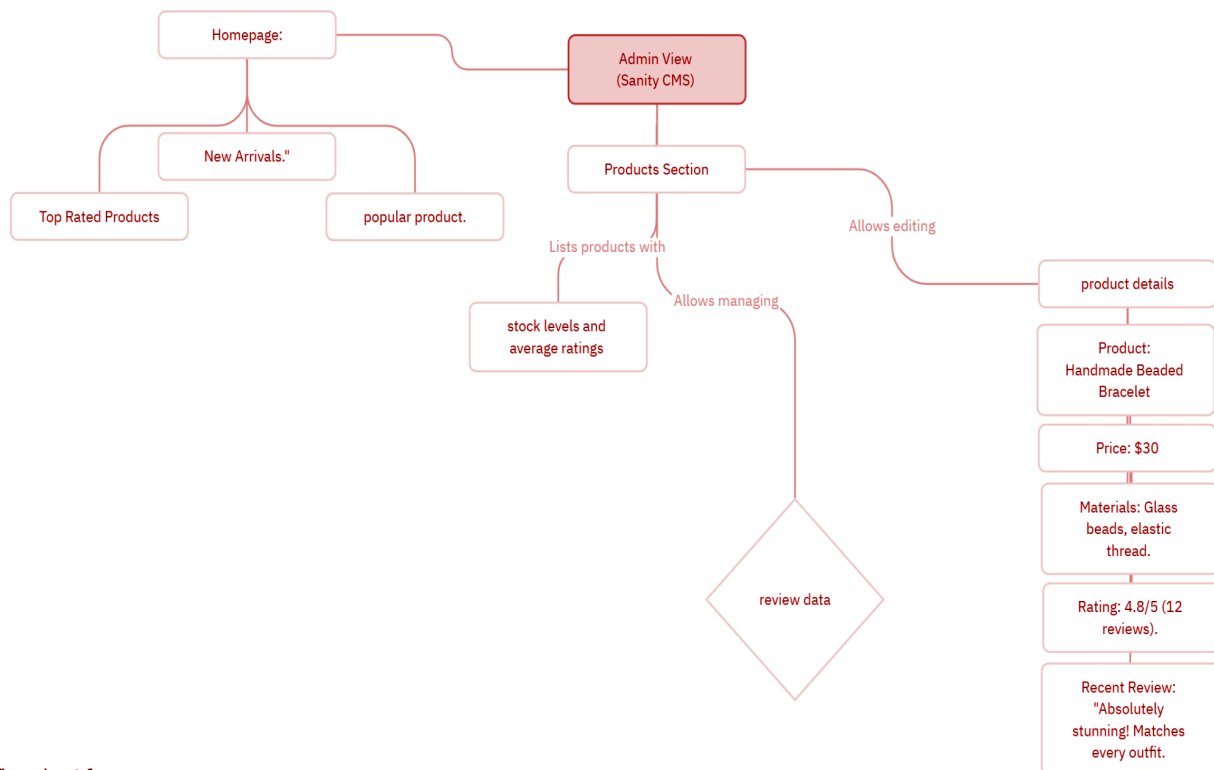
- ● **Components:**

Frontend (Next.js):

1. Dynamic rendering for pages like Product Listings, Product Details, and Reviews.
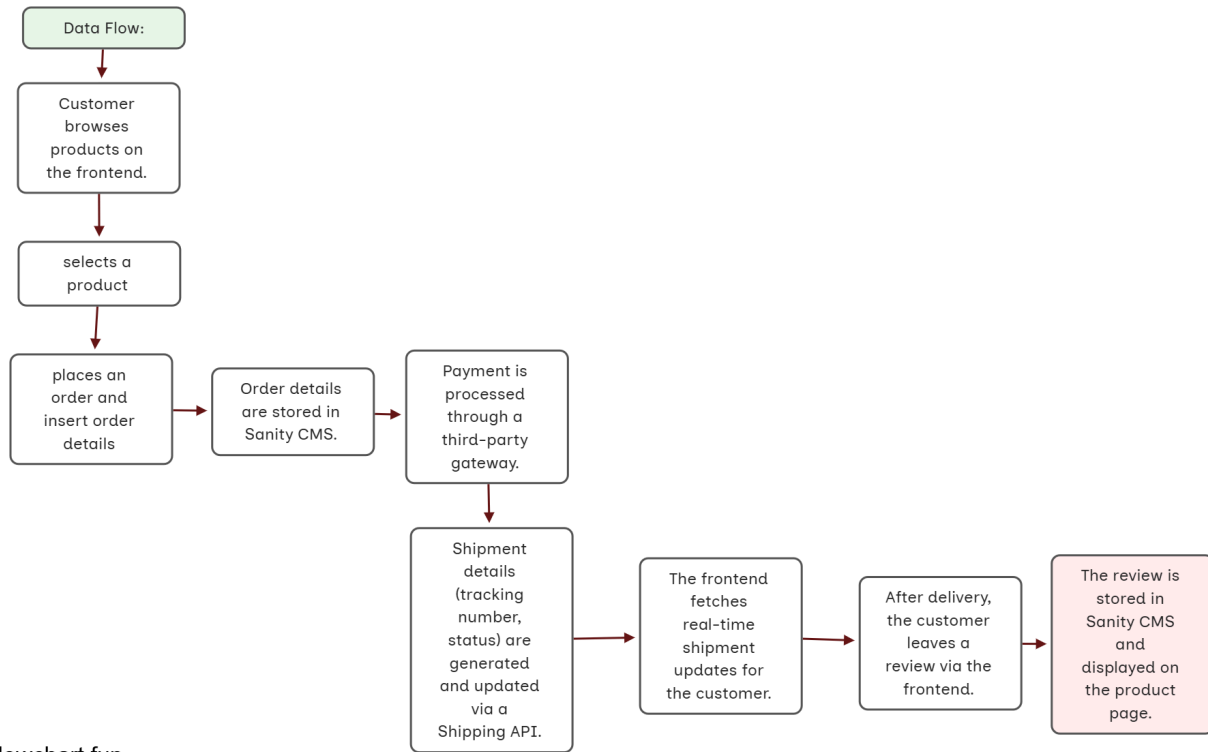2. Components for displaying and collecting customer feedback.

Backend (Sanity CMS):

1. Manage all product information, customer details, and order records.
2. focus entirely on maintaining inventory and orders.

API Integrations:

1. Payment Gateway for processing payments (e.g., Stripe, PayPal).
2. Shipping API: Tracks and updates delivery status.

```
Homepage: ───────────── Admin View
  │                      (Sanity CMS)
  ├── New Arrivals."          │
  │                      Products Section ──── Allows editing
  ├── Top Rated Products      │                    │
  ├── popular product.        │ Lists products with │
                              │                product details
                       Allows managing            │
                              │              Product: Handmade Beaded Bracelet
                       stock levels and            │
                       average ratings        Price: $30
                              │                     │
                         review data          Materials: Glass beads, elastic thread.
                                                    │
                                              Rating: 4.8/5 (12 reviews).
                                                    │
                                              Recent Review: "Absolutely stunning! Matches every outfit.
```

flowchart fun

Data Flow:

flowchart.fun

5. API Endpoints with Reviews

- **Fetch Product Reviews:**
  - **Endpoint:** `/api/reviews/:productId`
  - **Method:** GET

  Response:
  ```
      {
       "productId": "101",
  "reviews": [
   { "rating": 5, "text": "Loved it!" },
    { "rating": 4, "text": "Great quality." }
    ]
   }
  ```

- **Submit a Review:**
  - **Endpoint:** `/api/reviews`
  - **Method:** POST

Payload:

```
{

  "productId": "101",

 "customerId": "123",

 "rating": 5,

 "text": "Amazing product!"

}
```

- ○ **Response:**
  { "status": "success", "message": "Review submitted." }

+

.